



## TECHNOLOGICAL INNOVATION AND ODL

**C.David Amala Prabhakar**

Research Scholar,

Department of Education (D.D.E), Alagappa University,

KaraiKudi – 630003, Tamil Nadu.

Mail ID: davidmnm85@gmail.com

**Abstract-** Open learning, which covers a wide range of innovations and reforms in the educational sector that advocates flexibility to the learner with regard to entry and exit; pace and place of study; method of study and also the choice and combination of courses; assessment and course completion. The lesser the restrictions, the higher the degree of openness. The Open learning system aims to redress social or educational inequality and to offer opportunities not provided by conventional colleges or universities. Educational opportunities are planned deliberately so that access to education is available to larger sections of society. Thus, ODL is terms that accepts the philosophy of “openness” and uses the “distance mode” of learn into democratize higher education to large segments of the population, in particular, the disadvantaged groups such as those living in remote and rural areas, working people, women, etc. To provide an innovative system of university-level education which is both flexible and open in terms of methods and pace of learning; a combination of courses, eligibility for enrollment, age of entry, the conduct of examination and implementation of the programs of study; To

provide an opportunity for up-gradation of skills and qualifications; and To develop education as a lifelong activity to enable persons to update their knowledge or acquire knowledge in new areas.

**Keywords:** Learning, Education, Distance, Study, Methods.

### INTRODUCTION

The use of modern technical tools, also known as e-technology, in open learning is advocated on many strong bases broader and faster access to the learner, cost-effectiveness, and improved contact due to audio-visual attributes, easy editing and variation to add in new developments, repeatability and so on. These arguments are advanced for a better, vibrant, more valuable open and distance learning system. The use of modern technical tools, also known as e-technology, in open learning is advocated on many strong bases broader and faster access to the learner, cost-effectiveness, and improved contact due to audio-visual attributes, easy editing and variation to add in new developments, repeatability and so on. These arguments are advanced for a

better, vibrant, more valuable open and distance learning system. However, a more significant role remains unassigned to this new technology-mediated learning. The unique part, with a fundamental aim of bringing forth socio-economic maturity in the community through education, is providing a learning opportunity to many kids and young people. The paper seeks the statement of this role through a combination of a non-formal and formal learning system. The report aims to highlight the critical role newer and recent tools can play in providing a learning opportunity to a more significant number of children and small people and structure broader and deeper learning communities by integrating a non-formal and formal learning system. It will also discuss the ways and modalities in which this new role should be assumed. The linkage between technology-mediated learning and incorporated learning, on the one, give, and the ease of use of higher learning opportunities to a more significant number of children and adolescent people, on the other hand, will be presented in the paper predominantly. As a result, the report will also highlight the want and compensation derived through such a technology-based integration to communities, especially in developing countries, and different components of the system.

## The Concept of Open and Distance Education

There are many definitions of open distance education. For Raw (2008), distance education is a

“form of education that can easily become depersonalized both for staff and students. It is a learning system where the teaching behaviors are separate from the learning behaviors. The learner works alone or in a group-guided by the study material arranged by the instructor who, together with the tutors, is in a location apart from the students, who, however, have the opportunity to communicate with the tutor/tutors with the aid of one or more media such as correspondence, telephone, television, radio. It may also be combined with various forms of face-to-face meetings. On his own, Peters in Rao (2008), maintains that distance “is a form of indirect instruction imparted by technical media such as correspondence, printed materials, teaching and learning aids, audiovisual aids, radio, television and computers.” It is a type of education that is based on industrialized and technological communication (Rao 2008:3). However, the fact remains that correspondence courses/distance learning share the same goals and the same educational philosophy as the conventional on-campus method of instruction. Otto Peters (Rao 1008) posits that “it is essentially self-educational by the learner based on a private study in libraries, audio-visual carrels and laboratories.” Distance learning is believed to be the most industrialized form of education; this system of education is depersonalized both for staff and students, a form of indirect instruction. Discussing the limits of formal education, Sigh (2007) maintains that open distance learning, due to its innovative delivery method, brings about the equalization of educational opportunities while the formal school

system serves “the privileged few.” The program breaks down all the traditional barriers to teaching, such as age, location, availability, scheduling style and cost. In this regard, the masses can be educated and mobilized for national development hence preparing the country to reposition itself to be relevant in the transformation of her economy to meet the global need of the 21st century (Ogeh, 2011).

## Areas of Innovation in the ODL System

The canvas of innovations is broad in the ODL system<sup>5</sup>. The areas of the invention may include policy initiatives, design and development of courses, course content, methods and strategies of instruction, media used in learning, student support services, evaluation methodologies, and management and finance<sup>5, 6</sup>. There is increasing use of ICT in every aspect of the ODL system, such as educational administration, learner management, learner preparation for readiness, curriculum construction, and instructional design, support services including tutoring and library services, and learner evaluation<sup>5</sup>. The best practices at the Regional Centers of IGNOU could be classified into promotional issues, student registration, support service, academic initiatives, monitoring and special initiative<sup>7</sup>. The National Centre classified the innovation for Innovation in Distance Education (NCIDE) IGNOU into six categories: Academic Programmes, Application of ICT in delivery mechanism, Admission procedures and learner support, Evaluation methodologies and practices, Convergence of systems, and Quality

management and benchmarking<sup>8</sup>. The Innovation Process in the ODL System There is mainly two innovation methods in any system, including the ODL system. The first method is to carry out in-house efforts to create innovative solutions and introduce them to the system. The second method is to identify practical innovations that have been tried and tested elsewhere in a similar design and adapt them suitably to meet the system's needs.

The in-house method follows a process that comprises the following significant steps:

1. Identification and collection of ideas through various sources and methods.
2. Idea enrichment through various creativity and innovation tools.
3. Development of project proposal.
4. Approval of the Project Proposal by the University Management.
5. Development of prototype.
6. Implementation.

The second method begins with identifying an existing innovation, followed by its suitable enrichment, gap analysis, proposal development, approval, and implementation of adaptation in the system. For implementing these processes, a concerted study of the diverse components of the ODL system becomes essential to identify gap areas where innovations are required. Simultaneously, efforts are made to introduce innovations in the system to enhance its quality of functioning. This is a continuous process as problems keep cropping up from time to time in the design, requiring innovative solutions. Innovation in ODL System and the Systemic Barriers Several SOUs are at the forefront of innovation, such as the



Bhim Rao Ambedkar Open University (BRAOU) and Yashwantrao Chavan Maharashtra Open University (YCMOU). They have put in place innovative mechanisms to improve the system. The BRAOU has been using a technology-based teaching and learning system to reach the unreached and provide education for all. It has adopted a multi-media approach for instructional delivery which comprises printed course materials, contact cum counseling sessions on Sundays, Winter/ Summer schools of short duration, extension lectures, radio lessons and interactive radio, audio/ video programs, live conferencing, hands-on laboratory practice and continuous evaluation through assignments<sup>9</sup>. However, it has also been found that there is a need for flexibility in the top management to bring positive change. There have been suggestions that if the higher control is not active ineffective management, enhancing the system would be an unattainable task<sup>10</sup>. The YCMOU has adopted several best practices, mostly in tandem with the emerging social needs in institutional commitment and support, flexibility in curriculum and learning strategies, and assessment and evaluation. The most notable innovations are in the areas of technology-enabled teaching-learning. The University has emphasized staff training and professional development, resulting in work efficiency. The lack of administrative support is one of the significant constraints faced by the University, and proactive management is required<sup>11</sup>. At the IGNOU, several innovative products and processes have been developed and implemented in diverse areas of academic

programs, evaluation methods using ICT, learner support, administration, and convergence of systems. A database of about 125 ideas and innovations in the ODL system has been compiled and made available at <http://navdharana.ignouonline.ac.in/navdharana/>. The systemic barriers to innovation at IGNOU have also been studied<sup>12, 13</sup>. Systemic barriers and reasons John Maynard Keynes, the British economist, had distinctly identified the underlying attitude for raising barriers to new ideas in 1935. He had written, "The difficulty lies, not in the new ideas, but in escaping from the old ones, which ramify, for those brought up as most of us have been, into every corner of our minds."<sup>14</sup> Apparently, this attitude is still found in the ODL system. Several systemic barriers or bureaucratic impediments to innovation have been studied and identified by M. J. Kirton<sup>15</sup>. These impediments are either delay in introducing the idea, objection to new ideas, and rejection of individuals. One way of looking at it is that the digital revolution, transforming field after domain, has reached technology itself and is starting to change technological growth as we know it recursively. These unlock an excellent latent, but it raises concern about what it means to technology – and not only humans – has organized over technological progress. As discussed, there is both a hopeful and negative stance regarding our technological future. At any rate position in this matter, it is clear that talented technologies are becoming increasingly important in innovation. Now, scientific evolution has reached a point where it can help us conquer – or at least skirt –





our cognitive shortcomings. Where the human brain fails to display self-beneficial for driving change and innovative thinking, technology can give us an extra push towards a better creative capacity. One area close to my understanding is design, particularly planning and innovation. Today's designer has a new set of potential tools for crafty and prototyping. Both rapid and create shapes and communications that would have been impossible a decade ago. Extensive statistics, machine learning, and the Internet of Things (IoT) were the most significant educational technology trends of 2019. However, distance learning has developed into the direction that rules them all. The COVID-19 pandemic has rigorously changed the way we educate and learn. Due to common distancing, students must get used to distance learning via digital platforms. Even though some schools are reopening, this trend may continue in 2021. The newest EdTech trends in 2020 and 2021 are being revolutionized with a physically strong focus on connectivity, versatility, and student-centered learning. Let's take a look at the latest top 10 trends in educational technology. Many people can identify that EdTech is devoted to technology to advancing education. It's true, but not enough. The Association for Educational Communications and Technology (AECT) has defined EdTech as "facilitating learning and improving performance by creating, using, and managing appropriate technological processes and resources." On the other hand, educators who use EdTech control a much simpler explanation of the word. They say it is a concept of transforming established book teaching and learning into digital form. For them,

the main difference is deception in how knowledge is delivered (thanks to technological innovation) to make education more successful. In short, EdTech is just a process of integrating technology into learning to build better teaching/learning experiences that result in higher learning outcomes. For example, several hospitals are training their new nurses with online safety courses using animation. There are many reasons why educators shifted to EdTech, replacing the conventional paper-and-pen teaching method. Notably, we inventory several common advantages of EdTech to facilitate you can quickly see here. Technology is an improvement of humans, so when a teacher can apply the skill to teach, it is also innovative. For example, EdTech allows teachers to provide multimedia to address diverse learning styles, such as moving pictures, live videos, etc. Besides, EdTech enables teachers to create online courses where students can learn in there have space and at their own pace. Technology has made it likely for everyone to stay associated. Students and teachers join, talk about, share their opinion, and act upon situations collaboratively. For example, ELearning is an educational tool that features teamwork by enabling students to share and discuss. Instead of being in a classroom and listening to teachers speak for 30 minutes, ELearning students can join an online cluster/display place and study together by interacting with their peers. In this case, teachers are more accessible and act as mentors to help students increase themselves. This collaborative education advance has bridged the gap between teachers and students and helps students reinforce their interpersonal skills.



Firstly, EdTech benefits how teachers educate, both online and offline. Not always having to go to a specific class at a particular time, students can learn every time and anywhere. Secondly, EdTech changes the means students approach learning. EdTech makes learning more fun and exciting for students. When we feel busy learning, we know better, remember better, and affect knowledge better to true life. Lastly, technology makes education more intelligent and capable, thus, satisfying learners' needs more. True educators bring expensive expertise to learners in theory and actual life. But brilliant educator is those who can make teaching from what learners want to learn. To sum up, EdTech doesn't mean teachers must become IT, experts. But teachers can indeed do these beautiful things only with technology, and that's why we need EdTech in life.

## Top 10 Current Educational Technology Trends In 2020/2021

If you are an innovative educator, subsequent educational trends are likely not something unique but necessary. Even with this list, however, it is immobile up to you to select the most suitable "stylish" aid for your teaching and training. So here we choose the ten latest educational technology trends that are must-know when headfirst into this modern.

E-learning: Distance learning immediately became the top 2020 educational technology trend because of the quick spread of COVID-19 and school closures. This led to a rising command for online learning platforms. E-Learning is education or

schooling delivered electronically. It can be slide-based online activities, or it can also be an online course that helps a business train people in essential skills. With eLearning, educational satisfaction is delivered to learners through computers, laptops, tablets, or smart phones. Not only saving points in time but opening many doors for interactive learning. Somewhat than being in an inactive experience, learners can decide what they need to study quickly and easily, wherever they are. They also learn through interacting directly with on-screen information through, for instance, dragging content from one place to the next. Moreover, the decision-making scenarios in ELearning also encourage learners to make their own choices on what they will learn next. In ELearning, learners soak in information through reading or viewing content; it changes how education is delivered. Also, many ELearning courses include animation, podcasts, and videos that create a multimode and practical learning experience. The last point is that although ELearning has been around for a long time, it stays emerald and continuously developing. Educators with the advantages of knowledge make learning extra effective. That's why more online and blended learning courses are produced nowadays. The range is an outstanding feature of online learning platforms. You can teach your students in real-time (synchronous) via live stream or cluster meetings using Zoom or Microsoft Teams, or you can use recorded (asynchronous) methodologies with a broad range of media and digital functions available to enrich lessons. An excellent online learning platform can also be combined with a

Learning Management System (LMS), so you can keep track of your student's learning outcomes.

**Video-assisted learning:** In recent years, video-assisted learning has become more popular as classroom displays. The “video day” is no longer a television on a trolley being wheeled into a class. With the internet and digital devices, every day can be a “video day.” This trend is also booming in distance learning conditions, where students learn through computer screens. Videos, especially animated videos, are highly beneficial to enriching lessons and making content understandable. It improves students’ outcomes and reduces teachers’ workload.

**Block chain technology :** The Distributed Ledger Technology (DLT) from block chain brings so many benefits to education, especially data storage. Every moment new data is added, it adds another “block” to the system, so the storage is strictly limitless. Simultaneously, the data will be encrypted and distributed across multiple computer systems. It makes transacting data decentralized and transparent. Blockchain technology used in Massive Open Online Courses (MOOCs) and ePortfolios to verify skills and knowledge. The DLT systems will answer the authentication, scale, and cost problems for ELearning agencies. Moreover, it can help student applicants Big data will get bigger: The learning knowledge needs to be adapted to cater to learners' wants. And with COVID-19 and online learning booming, we now have more extensive data than ever before. Instructional designers have relevant information about learners’ experiences to customize and

present the course in a suitable format. Some information you should look for is the course’s topic, learner enrollment, learner performance (time per course, completion, test result), and learner feedback (rating, survey). Artificial intelligence (ai)

AI currently is the "into a thing" in the US EdTech market. People have predicted that through 2021, AI could become the primary trend and grow by more than 45%. So why is the development booming in one of the world’s largest markets for EdTech? First and primary, AI can make routine basic activities in education, like grades. It’s now possible for teachers to automate grading of the multiple-choice and fill-in-the-blank questions. Thus, automated grading of students’ writing may not be far behind. Furthermore, both learners and educators could benefit from AI. For example, AI tutors could help students when teachers are too busy to care for everyone. Also, AI-driven programs can give both learners and educators cooperative feedback. That’s why small schools use AI systems to monitor learner progress and alert teachers when there might be an issue with students’ performances. Therefore, it’s not too fantastic that AI is a powerful subordinate for in-class teaching. Meanwhile, why don’t you help your learners get more out of the educational experience via AI?

**Learning analytics:** The present learning analytics landscape has been severely extended, especially for higher education. Learning analytics allow educators to assess and report student learning on the web. From that, they can understand better and optimize learning. When teachers read insights



from students' learning processes, they can improve their students' knowledge and skill attainment accordingly. For case in point, teachers can see what type of information (text, images, info graphics, or videos) students enjoy most and use it more in their following lessons. Also, teachers can observe what pieces of knowledge weren't successfully delivered and enhance the next time. Moreover, learning analytics helps educators create blocks for students with university or behavioral challenges. From that, teachers could extend a way to help students reach their full potential.

**Gamification:** If you are looking for a way to turn erudition into a more fun and winning process, gamification is the most suitable educational technology trend. There is no reason for students not to be actively involved in classroom games. Students can learn and practice while joining in on exciting game activities. Gaming elements help create a funny and positive learning environment for learners. The adoption of gamification is nearly all popular in the K-12 education sector. It's because kids are quickly engaged in gaming videos or getting higher scores in a game. However, it doesn't mean that higher education or corporate training doesn't need fun elements to improve the engagement level of learners.

**Immersive learning with vr and ar:** The class knowledge experience has changed dramatically since Virtual Reality (VR) and Augmented Reality (AR) came into teaching. The rise in demand for experiential learning pushes forward the development of education with VR and AR. Knowledge has become much more interactive than conventional methods. While VR provides a

constructed reality, AR gives an enhanced view of an actual image. Thus, they help explain a complex concept that explicit images or even a lab's hands-on experiment couldn't show students. For example, VR is helpful when attending a medical preparation course. In detail, VR allows students to experience real-world surgeries in low-risk environments.

**Steam: STEAM-based programs** are the new EdTech development over the STEM programs. This new trend of EdTech applies essential Science, Technology, Engineering, Art (the new element), and Math content to solve real-world problems through hands-on knowledge activities and creative design. Concerning the reward of STEAM, the first thing is that it helps students become more and more curious about the world around them. Moreover, it also creates a safe setting for the learners to express their ideas while thinking outside the box. The comfort of hands-on learning also helps students act as a team better with others.

**Social media in learning:** Have you ever thought social media would be a part of the learning procedure? When every student, both young and mature, spend so much time on social media, why don't we turn it into a powerful tool to enhance learning? Its how the thinking to create social media for teaching came about. Many educational institutes have started using social media as a communication tool in which students can interact with others easily. Students can share study materials, discuss with others in a group, or comment on someone else's post. Even an active learning video could go viral on social media. And



TedEd is the typical example of this trend! This institute creates lessons worth sharing and posts them on YouTube, where people can easily access, find, and share educational videos with their friends. Social media is here to stay and build a culture of collaboration and sharing, leading to an improved learning experience.

## CONCLUSION

In the end, we know there is a lot to take in when discussing educational technology trends. However, keep in mind that technology has seeped into education and changed its teaching and learning process. Especially ELearning, an educational tool that not only increases the ease of access and eases of schooling but also changes the learning behaviors and learners' requests for learning. But now is good news; you don't need to go alone on this EdTech ship because you have us who will join you in bringing forth the actual value of learning, inspiring learners, and making education more relevant and empowering.

## REFERENCES

- [1] Bates, A. W. (1995). Technology, Open Learning and Distance Education, London: Routledge, 29-31
- [2] Bates, A. W. (1991). Interactivity as a Criterion for media selection in distance education: *Never Too far*, 16: 5-9.
- [3] Barden, R. A. (1996). "The case for linear instructional design and development: A commentary on models, challenges and myths" *Educational Technology*, 2, 5-23

[4] Christina, S. (2001). *The Use of Information technology for the management of Education In Singapore*, Commonwealth Secretariat, London, United Kingdom.

[5] Coble, W. (1996). Tele-learning: Deconstructing Courses. International Conference on Technology and Education, New Orleans, Louisiana, USA, March 17-20, pp. 416-18.

[6] Haddad, W., & Drexler, A. A. (2002). (Eds) *Technologies for Education: Potentials, Parameters, and Prospect*, Washington D.C.: AED, Paris UNESCO.